

# Quadrilateral QR Scavenger Hunt



<http://SmartBoardSmarty.wikispaces.com>



<http://GreenApples.wikispaces.com>



<http://GeometryGems.wikispaces.com>

Nancy Norem Powell

## QR Challenge:

### Quadrilateral Scavenger Hunt

**QR Codes for Teachers: Use the 'Group starting' codes to start the lesson.  
Place the 'Quiz Questions' around the room or school.**

Note: each of the QR codes is a text file. There is a couple of web sites for the mobile devices to connect to the internet to decode them.

To prepare for the scavenger hunt,

1. Print enough shapes so that each student has a set of shapes - each student can make their own on a previous day or you can use the ones on pages 5-8 of this notebook file.
2. Print the QR codes on colored paper or mount them on colored paper after they are printed to group them into stations.  
Aqua - pages 12-14  
Orange - pages 15-17  
Yellow - pages 18 - 23  
Green - pages 24 - 27  
Purple - pages 28 - 31  
Red - pages 32 - 34
3. Post the stations around the room.
4. Divide students into teams of 3-5 students.
5. Students should have a set of shapes and have access to rulers and protractors as well as their mobile devices, pencils and an extra paper for additional notes they might take.
6. Place the directions on the SMART board.
7. Move on to the starting codes to get groups started (page 10). They scan their group's code to find where to start.
8. When groups finish all the stations, have them scan the code for the quiz (page 11) and either take the quiz individually or as a group - you choose! Have them take a photo of their completed quiz and send it to you via email or show it to you.

<http://www.math.com/school/subject3/practice/S3U2L3/S3U2L3Pract.html>

## Teacher Notes - p. 2

Here are the tasks/questions

### Aqua Questions

<http://goo.gl/Tn6Cfm> - Aqua and Orange



1. Draw and measure the lengths of the diagonals of your quadrilaterals.
2. Find any special quadrilaterals with congruent diagonals, note that on the back.
3. Do any of the diagonals bisect opposite angles? If so, note that on the back, and proceed to the Orange station.

### Orange Questions

1. Measure the angles of your quadrilaterals.
2. Rank the quadrilaterals by the number of pairs of congruent angles in each.
3. If you found any quadrilaterals with only one pair of opposite angles congruent, note that on the back, and proceed to the Yellow station.

### Yellow Questions

<http://goo.gl/irvFyH> Yellow



1. Measure the sides of your quadrilaterals.  
Web Site: <http://www.math.psu.edu/dlittle/java/geometry/euclidean/reflection.html>
2. Draw a triangle with the red, green and blue points on the website.
3. Reflect it over the line through the green and red points to create a quadrilateral.
4. Which special quadrilaterals can you make this way? (Move the blue point around.)  
Draw pictures with the line of reflection.
5. If you found at least two quadrilaterals with all 4 sides congruent, note that on the back, and proceed to the Green station

## Teacher Notes - p. 3

<http://goo.gl/8O5W1g> Green Purple Red



### Green Questions

1. Find and label parallel sides on your quadrilaterals.
2. Go to the website shown and create a parallelogram with one side on  $y = 7$  and one on  $y = 2x + 3$ . Write your equations.
3. If you found a quadrilateral with no pairs of parallel sides, note that on the back, and proceed to the Purple station.

### Purple Questions

1. Find and label relationships between diagonals.
2. Identify quadrilaterals whose diagonals bisect each other or are perpendicular to each other.
3. If it is possible, draw a trapezoid with perpendicular diagonals.
4. If you found at least two quadrilaterals with diagonals that are perpendicular bisectors of each other, note that on the back, and proceed to the Red station.

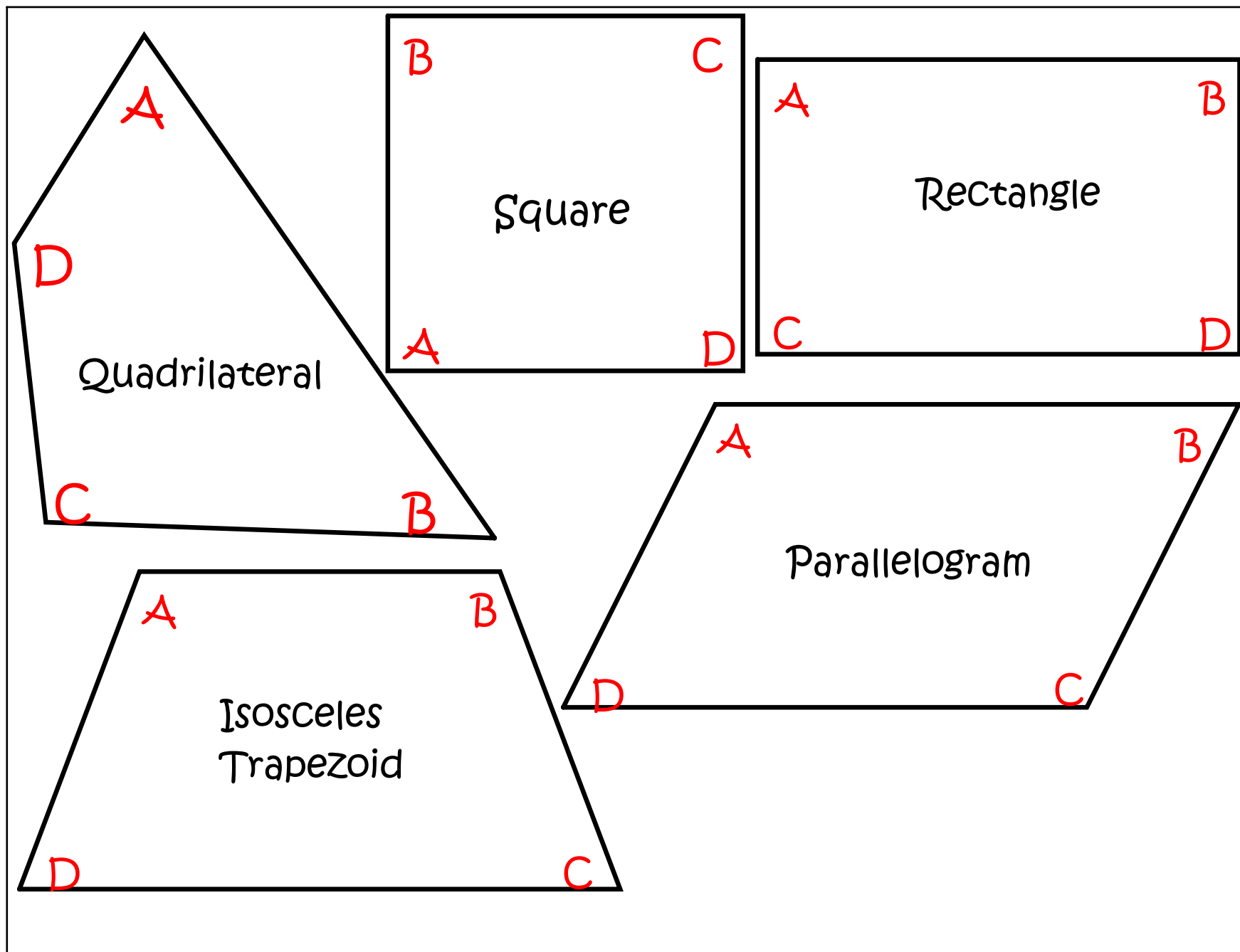
### Red Questions

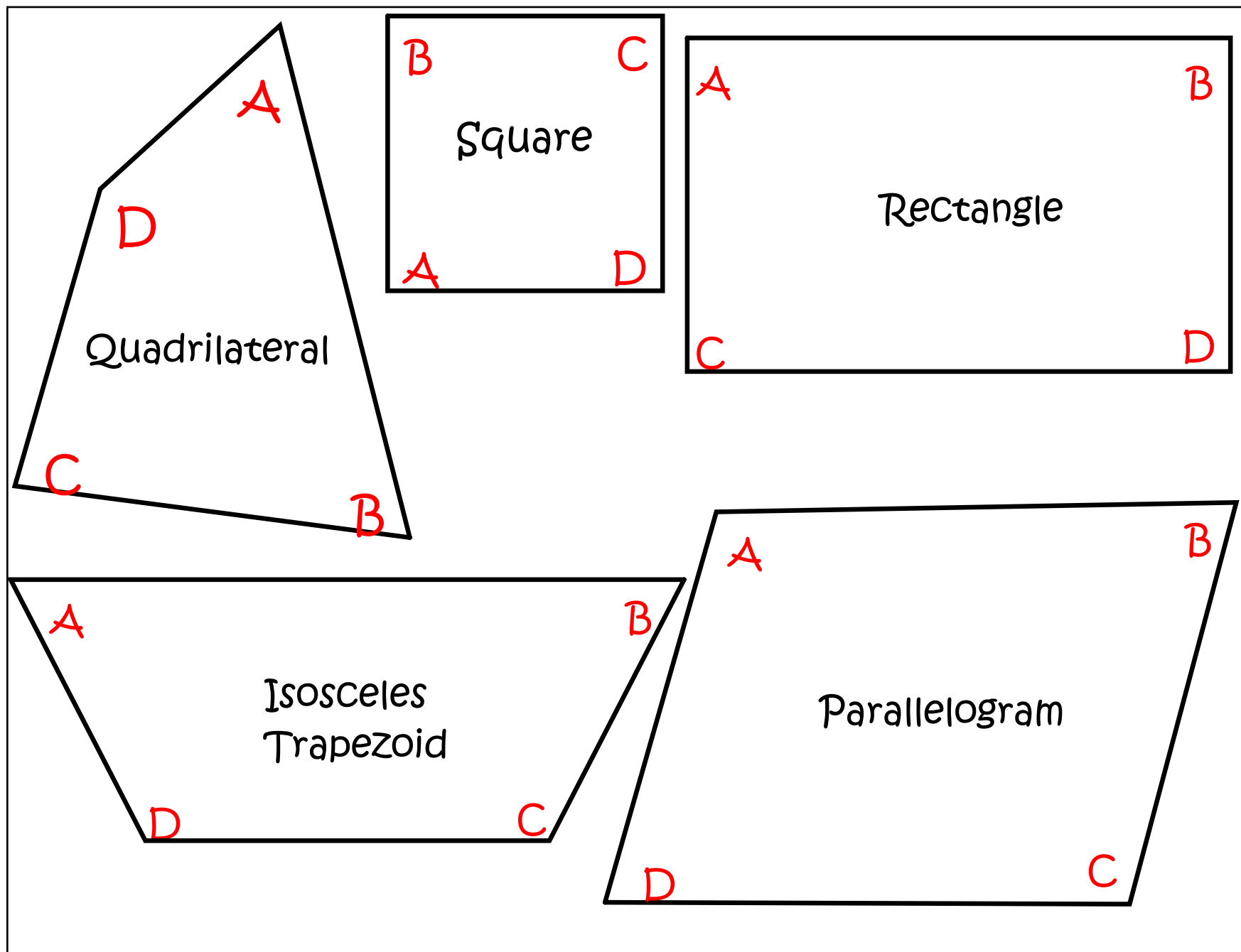
1. Find and label relationships pairs of angles in the quadrilaterals.
2. Find as many quadrilaterals with a pair of consecutive angles supplementary as you can, put a note on the back of them.
3. When you can prove/show that the sum of the angles in any quadrilateral is 360o two different ways, write them down and proceed to the Aqua station.

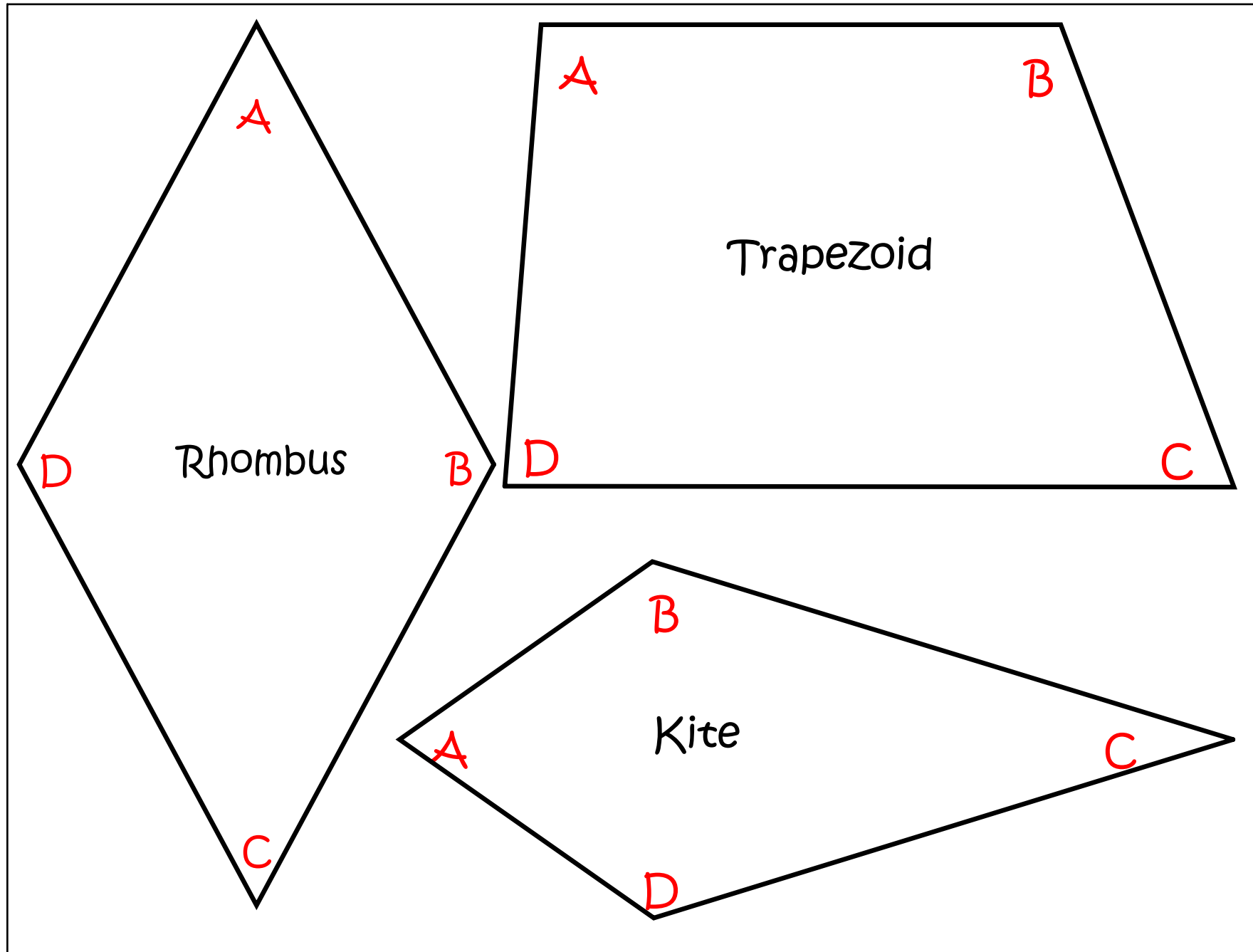
### Group starting codes

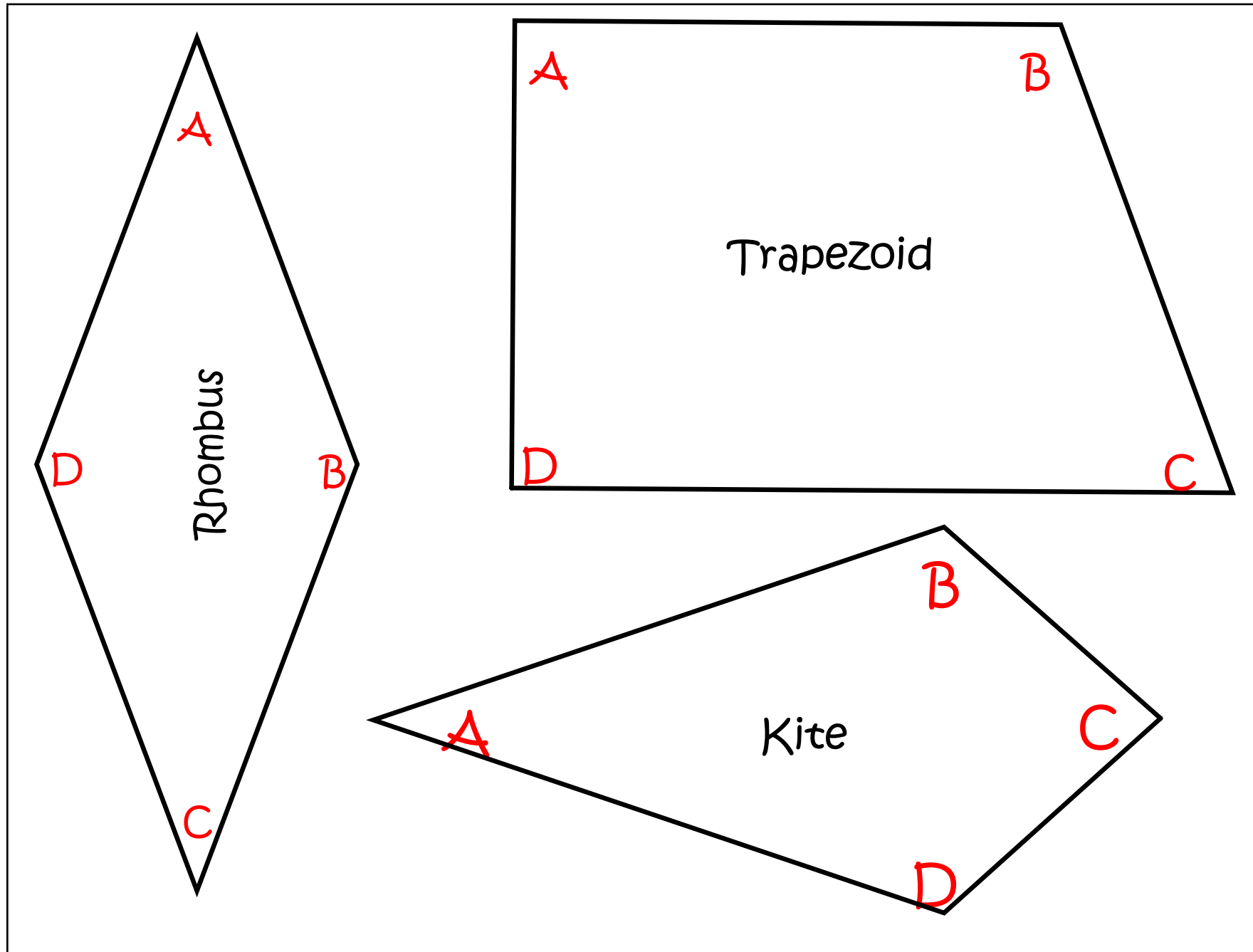
Group 1 start at the RED station. \*A  
 Group 2 start at the AQUA station. \*A  
 Group 3 start at the YELLOW station. \*A  
 Group 4 start at the PURPLE station. \*A  
 Group 5 start at the GREEN station. \*A  
 Group 6 start at the ORANGE station. \*A

<http://goo.gl/gpvEFn>











## Quadrilateral QR Scavenger Hunt

- Your job is to find the QR codes which your teacher
- has put on display around the area. Scan each QR
- code into your mobile device to get a challenge question or task.
- Follow the directions and record the correct answers to all of the questions. Feel free to take additional notes on a separate piece of paper
- Take the quiz when you have completed the scavenger hunt.
- Good luck!

## Where to Start



Group 1



Group 2



Group 3



Group 4



Group 5



Group 6

# Done? Take the quiz





Quadrilateral Aqua Orange Questions: QR Challenge



Aqua question 1 of 3



Quadrilateral Aqua Orange Questions: QR Challenge



Aqua question 2 of 3



Quadrilateral Aqua Orange Questions: QR Challenge



Aqua question 3 of 3



Quadrilateral Aqua Orange Questions: QR Challenge



Orange question 1 of 3



Quadrilateral Aqua Orange Questions: QR Challenge



Orange question 2 of 3





Quadrilateral Aqua Orange Questions: QR Challenge



Orange question 3 of 3



Yellow Quadrilateral Station: QR Challenge



Yellow Question 1 of 5

Use this website to complete the  
questions in this Yellow station



Yellow Web Site



Yellow Quadrilateral Station: QR Challenge



Yellow Question 2 of 5



Yellow Quadrilateral Station: QR Challenge



Yellow Question 3 of 5



Yellow Quadrilateral Station: QR Challenge



Yellow Question 4 of 5



Yellow Quadrilateral Station: QR Challenge



Yellow Question 5 of 5



**Green** Purple Red Quadrilateral Stations: QR Challenge



Green Question 1 of 3



Use this website to complete the  
questions in this Green station



Green Web Site



**Green** Purple Red Quadrilateral Stations: QR Challenge



Green Question 1 of  
32



Green Purple Red Quadrilateral Stations: QR Challenge



Green Question 3 of 3



Green Purple Red Quadrilateral Stations: QR Challenge



Purple Question 1 of 4



Green Purple Red Quadrilateral Stations: QR Challenge



Purple Question 2 of 4



Green Purple Red Quadrilateral Stations: QR Challenge



Purple Question 3 of 4



Green ~~Purple~~ Red Quadrilateral Stations: QR Challenge



Green Question 4 of 4



Green Purple Red Quadrilateral Stations: QR Challenge



Red Question 1 of 3





Green Purple Red Quadrilateral Stations: QR Challenge



Red Question 2 of 3



Green Purple **Red** Quadrilateral Stations: QR Challenge



Green Question 3 of 3